agricultural SITUATION

the crop reporters magazine

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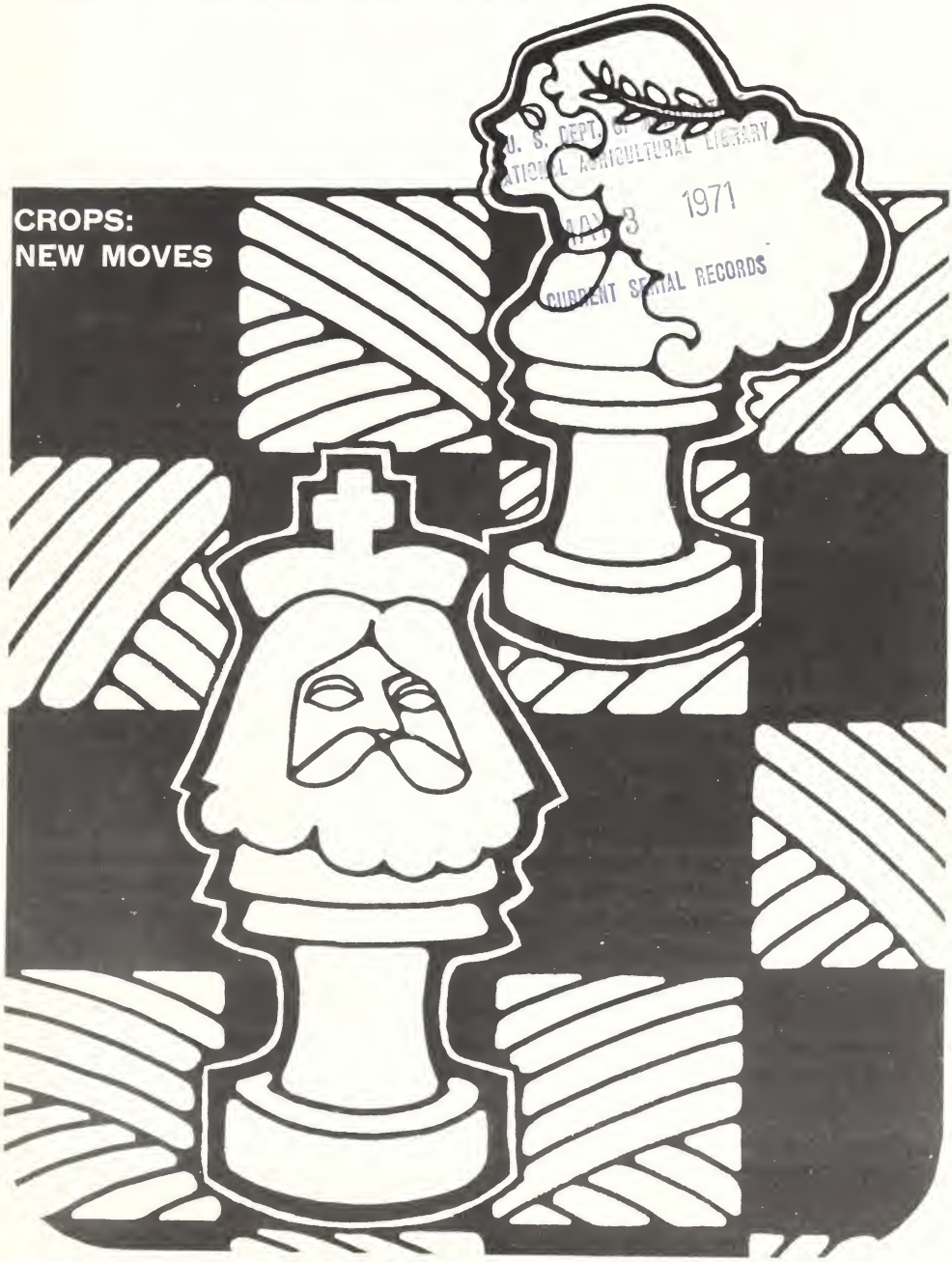


CROPS: NEW MOVES

At the turn of the century U.S. farmers were planting some 300 million acres to 59 major crops. By 1932, they'd upped acreage to over 375 million. By 1970, the cropland base had shrunk to about 301 million planted acres.

While total acreage has reverted to its turn-of-the-century level, the mix is certainly different.

U.S. farmers' shifts in how much land they devote to particular crops has markedly altered production acreages and locations.

Farmers' most pronounced moves have been in cotton, soybeans, and sorghums, but other crops get involved in the realignment of the three.

Cotton

Cotton acreage has fluctuated because of changing demand and farm programs from the over 20 million acres of the 1950's to 12 million that farmers intend to plant in 1971.

Increased yields due to mechanization, fertilizers, and plant breeding kept production fairly constant through the mid-1960's, but cuts in acreage after 1965 forced production down.

The crop has moved out of the hill counties of the Southeast into level areas to the west where the terrain is suitable for mechanical planters and harvesters.

Alabama, Georgia, North and South Carolina as a group planted an average 3.5 million acres yearly to cotton during the 1950's. This year farmers in those States intend to plant only 1.5 million acres.

Three areas—the Mississippi Delta, west Texas, and southern California—will have over two-thirds of this year's cotton acres.

Cotton's last southern stronghold is in the delta areas of Mississippi and Arkansas. In the sandy delta soils cotton holds a large profit advantage over all other crops. In the black soil areas, it has an extremely close competitor in soybeans, and from year to year cotton's support price is what dictates which of the two farmers plant.

Texas soils are a good home for cotton—and almost half of the Nation's cottonland lies there. Although the 8.5 million acres Texans planted in the 1950's may be down to almost 5.4 million this year, certain varieties are on the rise.

Trending upward in Texas are the short staple upland types, unprofitable elsewhere in the country. There is export demand for these staple lengths because foreign nations with cheap labor can afford to make them into fabric.

Also on the rise in Texas, Arizona, New Mexico, and California is extra long staple cotton, known as American Pima. This variety is suited only to sandy irrigated soils, a good reason why Arizona will grow almost half of the 110,000 acres to be planted to this variety in 1971.

Soybeans

Ever since new soybean varieties suited to southern soils and climate were developed, the South's crop has steadily increased.

	1950–59 average	*1971 intentions*
	(*Million acres*)	
North Carolina	0. 5	1. 1
South Carolina	. 3	1. 1
Georgia	. 1	. 7
Alabama	. 1	. 7
Tennessee	. 4	1. 4
Arkansas	1. 3	4. 3
Louisiana	. 3	1. 9
Mississippi	. 7	2. 4

Over the past quarter-century, Arkansas, Louisiana, and Mississippi soybean acres have increased 13-fold—jumping from 5 to 19 percent of the U.S. total. Many occupy lands recently brought into production by clearing and

providing drainage. From 1959 to 1964, for example, the delta brought 1.2 million new crop acres into production.

This year these delta area farmers plan to devote almost 8.7 million acres to soybeans, compared with 2.3 million, on the average, during the 1950's.

Soybeans started on their road to success in the Corn Belt, where they've done quite well. Right now, around 60 percent of the Nation's harvested acreage lies there.

Take, for example, the increases in four Corn Belt States:

	1950–59 average	*1971 intentions*
	(*Million acres*)	
Ohio	1.2	2.7
Indiana	2.0	3.7
Illinois	4.4	7.7
Iowa	2.2	6.0

Throughout the area, the rise of soybeans can be associated with the decline in oats, wheat, hay, cropland used for pasture, and government efforts to control the production of corn.

Soybeans have provided Corn Belt farmers with an excellent alternative to corn.

In 1970, corn yields of 102 bushels per acre in the Corn Belt returned farmers an average of $55.31 over variable costs. Soybeans, yielding about 31 bushels per acre in the same areas, brought home $47.09 above variable costs—a rather good alternative indeed.

In Iowa, which escaped much of the blight in 1970, farmers intend to increase soybean acreage 3 percent this year. In Illinois, where the corn blight struck, intended soybean acreage is up 12 percent—a really significant increase in the Nation's No. 1 producing State.

The soybean crop does promise good prices this year because at present disappearance rates we'll use more soybeans than we produced in 1970 and there'll be less than a month's supply in stock on September 1, 1971.

SORGHUM

Just as soybeans provide a profitable alternative to corn in the Corn Belt, sorghum is a second best crop in the Texas High Plains.

New hybrid varieties have put Texas

into the No. 1 sorghum spot, and made it the newest major feed grain area.

Sorghum acres have risen continually in the Southeast. Land formerly in cotton now grows sorghums and other feed grains to support growing cow-calf operations.

This year sorghum acres in the U.S. are up 16.5 percent for a total intended acreage of almost 20.2 million acres.

While sorghum has been on the upswing for several years, farmers apparently increased plantings in 1971 because of last year's corn blight and the resulting below-average feed supply.

TAX TALLY

Taxes levied on farm real estate by State and local governments increased 11.1 percent during 1969, the latest year for which data are available.

This annual increase, the 27th in a row, raised total U.S. farm real estate taxes to nearly $2.3 billion.

Taxes levied on farmland were up from 1968 in all States but Arizona and Oregon.

The largest increases occurred in Delaware, 52 percent; Tennessee, 22 percent; and Iowa, 20 percent.

Delaware's boost, which followed a decline the previous year, apparently was connected with school reorganization.

Taxes rose more than 15 percent in eight States during 1969 and were up 10–15 percent in 14 other States.

On a per acre basis, farmland taxes varied widely, from an average of $18.87 in New Jersey to 18 cents in New Mexico. However, the tax per acre averaged over $3 in only 20 States and was between $1 and $3 in 17 others.

Last year, as in previous years, increases in the costs of State and local governments and in public school expenditures were the main overall causes of farm tax hikes.

In particular, a few States account for a large share of the total farm real estate levies, and changes in these States strongly affect the national total. Farm real estate taxes in California, Illinois, and Iowa accounted for more than one-third the U.S. total in 1969.

The effective tax rate of farm real estate taxes during 1969 was $1.12 per $100 of full value, up 5.7 percent from the year before. This rise, coming on the heels of a 4-percent hike in 1968, represented a significant change from 1961–67, when the effective tax rate stayed relatively constant.

Those years, the rate ranged between 99 cents and $1.02. And while total taxes increased markedly during the period, values of farm real estate moved up at about the same rate.

In 1968 and 1969, however, the increases in taxes levied outpaced real estate appreciation.

Maine and Massachusetts had the highest tax per $100 of value at $2.43; Alabama the lowest, 25 cents.

Farmland taxes absorbed 11.4 percent of total net farm income in 1969, a bit more than in 1968.

BLUEGRASS BILLET-DOUX

A letter from James Koepper, Statistician in Charge of Kentucky's Crop and Livestock Reporting Service, prompted this note of thanks to all our crop reporter readers for their invaluable contribution to the SRS estimating program.

Koepper writes that his office recently honored five reporters who completed 40 years of voluntary service each during 1970.

And earlier this year over 1,900 other Kentucky farmers received special recognition for completing 10, 20, or 30 years of continuous service. Similar recognition is given by other SRS State offices.

Our thanks can't be as personalized as those extended by the local SRS staffs—but they are just as sincere.

It's only through your help that accurate and reliable crop and livestock estimates are possible.

WHICH WAY LAND VALUES?

Take an average acre of farmland that's been cultivated for a couple of generations and track what's happened to its value.

Starting in 1850, it was worth $11 (U.S. average). By the turn of the century, $20. In 1950, $65. And last November, $195.

(Values, of course, vary markedly by States. You couldn't touch a piece of farmland in New Jersey for $195 last year; per acre values were closer to $1,028. In contrast, Wyoming's land was worth some $36 an acre, the lowest in the Nation. In Illinois, the heart of the Corn Belt, per acre values ran about $483.)

To get back to our average acre, though: How come the big change in value over time?

Inflation is part of the explanation. But there have also been gains in productivity, increasing capital improvements, changes in government programs, and—above all—market demand.

The fifties and sixties were decades of fierce competition for farmland as producers vied with one another for expansion acreage while nonfarm people looked to the countryside for living room and work space.

The seventies will doubtless bring more of the same. But there are signs that the rate of growth in land values is starting to slacken in parts of the country.

Nationally, per acre farmland values last November were up only 1 percent from March 1970—the slightest gain in any similar period since 1960.

The entire year saw only a 3 percent rise in contrast to 1969's 4-percent hike and 1968's 6-percent spurt.

Changes in value per acre varied widely among States.

Six saw values climb 10 percent or more during 1970. In 15 States gains came to 5–9 percent; in 22, from 1–4 percent. The remaining 5 States experienced declines of 1 to 5 percent.

Sharpest drops were in Kansas, 5 percent, and California, 3 percent. Tight credit conditions apparently were partly to blame in both areas.

Regionally, strong gains in farm real estate values were notable only in the Northeast and Southeast during 1970.

In the first area, strong demand for rural homes and urban use buoyed land values last year, despite the shortage of market money.

In the Southeast, changing farm practices and enterprises accompanying technological change, plus a growing nonfarm demand, appeared to be the big factors back of the continuing strong market.

SPOTLIGHT ON MICHIGAN

Michigan has five capitals: Lansing, Detroit, Grand Rapids, Traverse City, and Saginaw. What makes each of them important?

Lansing, of course, is the State capital—home of the Governor and seat of the legislature. Detroit—obviously the automotive capital. Grand Rapids—if you've shopped for furniture lately, you'll know what makes that city famous.

But Traverse City and Saginaw—here's where most out-of-Staters will probably be stumped. Traverse City is Tart Cherry Town, while Saginaw is the Nation's bean capital.

Traverse City is not simply the United States but the world capital of tart cherry production. North of the city, the Old Mission Peninsula stretches through Grand Traverse Bay. On this finger of land grows the greatest concentration of tart cherry trees on earth.

Grand Traverse County, which contains both the city and the peninsula, holds around a sixth of Michigan's 3.65 million tart cherry trees. The trees cover only a fraction of the Wolverine State's acres, but in 1970 they bore 80,000 tons of tart cherries—over two-thirds of the Nation's total.

Cherry trees thrive near the shores of Lake Michigan. The orchards generally grow on hillsides for a few miles east of the lake. The location is so perfect that Michigan stands miles ahead of the Nation's No. 2 tart cherry producer, New York, which produced 18,000 tons in 1970.

The Michigan tart cherry harvest lasts from late June through mid-August. It starts in the southwest, where Michigan meets Indiana on the lake, moves north along Lake Michigan, and reaches the Grand Traverse area in late July.

During the last half decade or so, tart cherry harvest has changed from hand picking to almost total machine harvest. Orchards are bared either by tree or limb shakers, but usually the latter. These machines can get the cherries from a tree in about 30 seconds.

After harvest, most Michigan tart cherries are processed. In 1970, around 56 percent of the crop was frozen and over 42 percent canned, with the rest going to fresh uses.

And the little red cherries add up to a hefty dollar value: In 1970, the crop was worth over $11 million to the State's growers.

Michigan also scores high in production of other fruits. In 1970 it stood third in national apple, strawberry, grape and plum output, and fourth in sweet cherries and pears.

Highest total fruit production comes from the Berrien County area, which borders Indiana and Lake Michigan. All together, fruit production brought Michigan farmers almost $80 million in 1970.

On the eastern side of the State, in the Thumb area that juts into Lake Huron north of Detroit, lies the great Michigan bean area.

Michigan has long been the Nation's No. 1 dry bean producer. The story goes that right after the Civil War, a Michigan farmer pocketed a

handful of beans from his cousin's New York farm.

"I don't know if they'll grow," he supposedly said, "but I'll take 'em along and give 'em a try."

And grow they did. By 1970, Michigan was producing almost 6.3 million hundredweight of dry edible beans on 597,000 acres harvested.

The Michigan crop includes nearly all the Nation's pea beans and many of its red kidneys—well over one-third of our total bean supply. And the crop brought Michigan farmers over $52 million in 1970—not beans by any means.

In the Thumb area, Huron County is the bean champion: During 1970, farmers there planted 112,000 acres, which yielded nearly 1.1 million hundredweight of beans—mostly pea (Navy) varieties.

Just as Lake Michigan's weather promotes tart cherry production, Lake Huron's clime spells success or failure for beans in Michigan's Thumb.

Beans are planted in June and blossom in August. If the temperature should rise above 90 degrees, the blossoms won't set pods and yields suffer. If there should be a wet spell, the beans will discolor and become less desirable.

Michigan's other big bean crop is not a bean at all—it's an oilseed—the soybean.

In 1970, Michigan farmers harvested 524,000 acres of soybeans and reaped 13.6 million bushels, worth over $38 million.

Michigan also vies with North Carolina year in and year out for the Nation's top spot in pickle production. In 1970, farmers in Michigan planted 23,200 acres to processing cucumbers—eaten mostly as pickles—from which they reaped 103,950 tons of production and $10.4 million in pickle—sweet, dill, and kosher—value, for the Nation's No. 1 pickle spot.

Above: A Michigan farmer cultivates beans in the Thumb, the Nation's No. 1 spot for most types of beans. Right: Tart cherries are another of the State's top crops. Most of the harvest is now mechanized and it takes about half a minute to bare a tree.

the $100 billion assembly line

The Agricultural Plant consists of

2.7 million farms which contain 337 million acres in crops and summer fallow and 900 million acres for grazing livestock.

To this farmworkers applied 6.7 billion man-hours of labor.

To operate the Agricultural Plant, farmers spent

$7.1 billion for feed
$4.3 billion for livestock
$2.1 billion for fertilizer and lime
$3.4 billion for hired labor
$10.5 billion for seed, interest on non-real estate loans, and a wide variety of other current operating inputs.

From the Agricultural Plant farmers sold

$13.1 billion worth of cattle and calves
$4.5 billion worth of hogs
$6.5 billion worth of dairy products
$2.2 billion worth of eggs
$2.1 billion worth of poultry
$0.6 billion worth of sheep and minor livestock products
$6.6 billion worth of grains and hay
$3.2 billion worth of oilseeds
$2.1 billion worth of fruits and nuts
$2.8 billion worth of vegetables
$2.2 billion worth of other crops.

About 392 million tons of products are hauled from U.S. farms each year. Nearly all of it requires further handling by the Food Marketing System before being consumed.

The Food Marketing System has 700,000 firms. They employ the equivalent of 5.3 million full-time workers. This includes

32,000 processing firms having 1.4 million workers
40,000 wholesaling firms having 0.6 million workers
294,000 retail stores having 1.4 million workers
334,000 eating places having 1.9 million workers

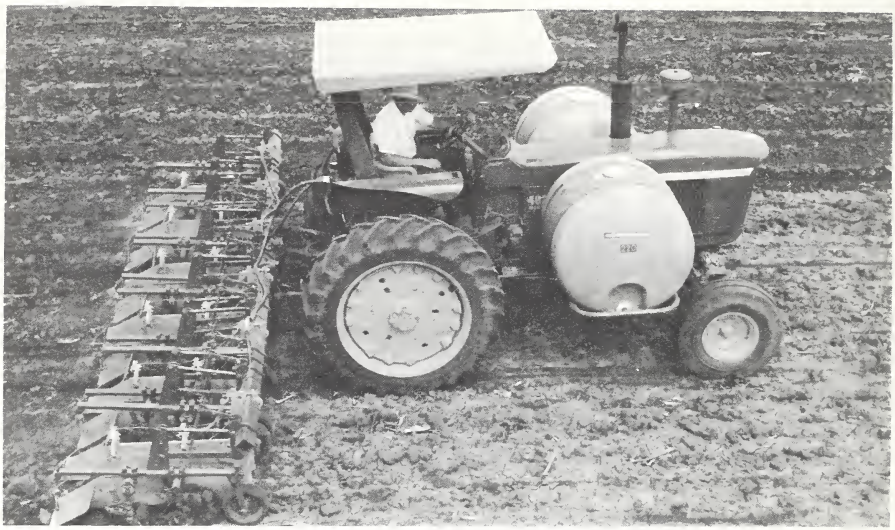
Binding the food production networks into an organic whole are 200,000 miles of railroads, 3.3 million miles of intercity highways, and 26,000 miles of improved waterways.

The food Assembly line supplied the average consumer with 1,450 pounds of food.

The farm value of these foods was $32.1 billion; value added by the marketing system was $63.2 billion.

Total food expenditures, $114 billion, were 16.7 percent of disposable consumer income.

About $1 out of every $9 in the Gross National Product is accounted for by the food industry.



CULTIVATORS:
FROM HAND TO HORSE TO TRACTOR

". . . the clumsy iron hoe is almost everywhere made to do the work of pick, spade, shovel, and plow . . . even to digging a grave."

An 1853 English traveler in the United States made this observation of the all-purpose hoe—the principal implement for cultivating corn, cotton, and other row crops of that period.

Transformation of the common iron, steel, or wooden hoe into the more complex, efficient and animal powered cultivator was sporadic during the 19th century.

The emerging cultivator took many forms—ordinary frame and plowshare, wheeled, rotary, disc, straddle-row, parallel, walking, riding, vineyard, expanding, spring tooth.

An early step in cultivator development was simply mounting a plowshare on a solid A-shaped frame. The design was similar to today's hand-pushed garden plow or cultivator. Next came the double-shovel cultivator.

A Scotsman, Wilkie, multiplied the effectiveness of this design and came up with the "plurality of shares." A further advancement was an adjustable frame with wheels that could be moved to different positions on the axle to allow the farmer to cultivate crops of different row widths.

A later improvement was the gang of plows mounted on a frame that would rise and fall with the terrain.

Most cultivator innovations were provided by farmers. For example, they substituted the teeth in their long-used drill machines for cultivator shares. They adapted various sizes and shapes of shares to different soil textures.

A big cultivator development provided by some comfort-minded American farmer was mounting a driver's seat atop the horse-drawn frame. This change was also functional; it enabled the driver to control and guide the unit more precisely.

By 1840, single-share, horse-drawn

cultivators were replacing hand hoes in wide areas of the country. The early A-frame cultivators were inexpensive—$14 to $20. The great advantage was that one cultivator, though heavy and clumsy, was able to do the work of three men wielding hoes. A larger cultivator pulled by a span of horses could replace 10 to 15 men.

The 1870 head of USDA stated that in 30 years farmers had moved from the tedious hand cultivating of an acre a day to cultivating 15 acres with almost the ease and comfort of a "buggy ride." Obviously spoken from a soft office chair.

In the East during the early 1860's, the hoe and the awkward one-horse cultivator were standard equipment in corn fields. Western farmers relied more on double and triple "shovel plows" for cultivation work.

Introduction of the more modern corn cultivator and wheat reaper were largely responsible for the rapid expansion of agricultural production in the West. The straddle-row cultivator was now on the scene and with its steel teeth saved man and horse labor. Generally, efficiency and quality of farm work noticeably improved.

When the two-row corn planters and two-horse cultivators were adopted, output leaped. An Ohio farmer, it was said, could produce his crops with a third less labor in 1860 than he had in 1840.

The cultivator was much on the minds of the Nation's inventors in 1869. That year the Patent Office issued 1,900 patents—150 of them for cultivators, alone.

One cultivator development about that time was a kind of buckboard-on-wheels with shovels set in gangs. No matter how crooked the row, the unit regularly cleared and dug up the spaces on both sides of the row at one time, as the operator rode along.

Other refinements included a foot control for the gangs of shovels, a swivel for the shares to throw dirt to and from the plants, a fender shield for each of the gangs. Another improvement allowed the driver to raise and lower the teeth without dismounting.

While some of the lore of the cultivator may have disappeared when production shifted from country blacksmith to the factory assembly line, the farmer gained a more efficient implement.

Of course, the big boost was the introduction in the 1920's of the general purpose tractor. It gave cultivators the power to work four, six, and even eight rows at a time.

EARTHSHATTERING EVENTS

In 1969, more than 58,000 mechanical cultivators were shipped from farm machinery factories. And, following the trend in agriculture, these cultivators were larger, more efficient units than in the past.

Shipments included 34,600 corn and cotton type cultivators for working one through six or more rows; and 21,700 field cultivators. Other units included beet, bean, and vegetable cultivators and drawn corn and cotton units.

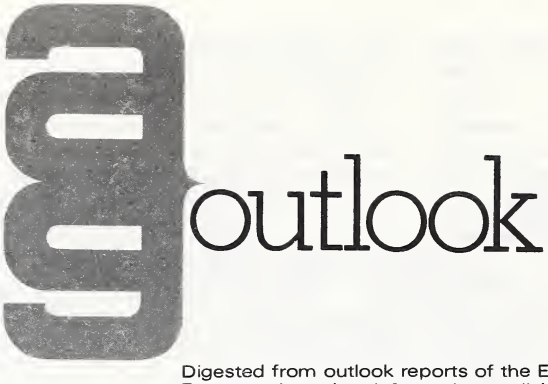
Besides complete units, shipments included 28,400 rotary hoe cultivator sections. These may be assembled into units for working from one to six or more rows of a crop.

Rising farm production costs are evident in the average values of cultivators shipped.

The 1961 corn and cotton rig had a value of $289, by 1966 it was $509 and in 1969, $600. The field cultivator jumped from $216 in 1961 to $447 by 1969.

The relatively inexpensive rotary hoe section rose from $91 in 1961 to $145 by 1969.

Average values reflect increasing average sizes of machines as well as a rising price level.



Digested from outlook reports of the Economic Research Service.
Forecasts based on information available through April 1, 1971

CATTLE OUTLOOK . . . Fed cattle marketings—and prices—seem slated to stay close to 1970 levels 'til summer. Growth in cattle feeding is stalled temporarily—result of high production costs and relatively low returns.

●

FED BEEF PRODUCTION should rebound after midyear, though. Placements on feed are running large and promise to stay big through summer, too. Of course, developments on the feed front will figure big in farmers' attitudes and plans in coming months.

●

HOGS . . . Very large pork output and low hog prices are likely to persist through June. However, summer should see some price strengthening as slaughter drops seasonally. Intended March–May farrowing reductions of 6% in the Corn Belt would curb fall slaughter and limit seasonal price declines then.

●

MEAT CONSUMPTION . . . On a per person basis, we'll probably top our 185.5-pound red meat total of 1970 by about 5 pounds this year. Pork consumption, though only about half as large as beef, will account for three-fourths of the gain. This would make per capita pork consumption the largest since 1952.

●

MODEST MILK GAINS . . . Look for a limited rise in 1971's output over last year's 117.4 billion pounds. Going for dairymen this year are a good supply of herd replacements, the easier labor situation, and record-high milk prices. On the other hand, increased costs of feed and other inputs stand to limit gains in net income.

●

COW NUMBERS . . . The Nation's dairy herd totaled 12.4 million head on January 1—down 1.4% from 1970 and the smallest annual decline since 1960. Prospects are for only a small dip in herd size this year, too. Apparently, less favorable off-farm job opportunities are helping to slow the drop in farm and cow numbers.

EGG EXPECTATIONS . . . First half production looks to be 2–3% above last year. Not only is the beginning 1971 flock 3% bigger, it's younger due to the addition of more replacement pullets and heavy culling of old flocks in recent months. Younger flocks typically are more productive.

●

BROILER BUSINESS . . . Indications are for little change in meat output from 1970's high level of 7.2 billion pounds, ready-to-cook weight. In response to depressed prices and rising feed costs in recent months, broiler men may keep output below last year through summer. Second half production may be up and about offset first half decline.

●

TURKEYS . . . Higher prices most of last year may encourage turkey growers to boost 1971 output despite sharply higher feed costs. Through midyear turkey meat output will be substantially above the same 1970 months. But the size of the 1971 crop rests largely on the seasonally heavy March–July hatch. On January 1, growers indicated they would raise 1% fewer birds than in 1970.

●

ACRES FOR 1971 [1] . . . Planting intentions for 17 crops in the March 1 survey are for a total of 269 million acres—4% or 11 million more than last year. Here's a crop-by-crop breakdown:

	1971 March intentions	1970 planted	1971 as a % of 1970
	Thousand acres		
All corn	71,480	67,171	106.4
White corn (10 States)	922	—	—
All sorghum	20,152	17,292	116.5
Oats	23,206	24,492	94.7
Barley	10,868	10,435	104.1
Durum wheat	2,525	2,091	120.8
Other spring wheat	11,378	9,059	125.6
Rice	1,825	1,825	100.0
Soybeans	46,493	43,332	107.3
Flaxseed	2,236	3,004	74.4
Peanuts	1,529	1,511	101.2
Cotton	12,061	11,942	101.0
Potatoes	1,454	1,453	100.1
Sweetpotatoes	125	146	85.7
Tobacco [2]	845	899	94.0
Dry beans	1,469	1,526	96.3
Dry peas	277	316	87.7
Hay [2]	63,481	63,234	100.4
Sugarbeets	1,447	1,475	98.1

[1] Does not include Alaska and Hawaii.
[2] Acreage harvested.

RICE RESUME . . . Our rice crop this year could end up somewhat larger than 1970's 82.9 million hundredweight—assuming a normal growing season and continued yield increases. The national allotment is the same, 1.8 million acres.

●

WORLD VIEW . . . Gains in both planted area and crop yields point to a new record in world (excluding communist Asia) rice output during the August–July 1970–71 crop year. Indications are for a 197-million ton total—3 million tons over last season.

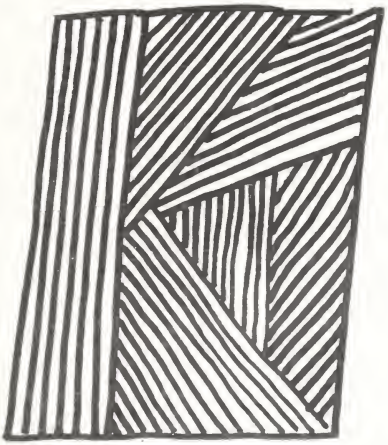
●

EXPORT OUTLOOK . . . The large world supplies are putting the damper on U.S. trade prospects. Exports in 1970–71 are likely to fall 5 to 10% short of the 54.9 million hundredweight of rice we shipped out last year.

STATISTICAL BAROMETER

Item	1967	1970	Latest data available	
Prices received by farmers	100	108	112	Mar. 1971
Prices paid, interest, taxes, wage rates	100	109	118	Mar. 1971
Ratio [1]	100	99	95	Mar. 1971
Consumer price index, all items	100	116	119	Feb. 1971
Food	100	115	116	Feb. 1971
Agricultural exports ($ bil.)	6.4	7.2	.6	Feb. 1971
Agricultural imports ($ bil.)	4.5	5.7	.4	Feb. 1971
Disposable personal income ($ bil.)	546.3	684.7	696.9	([3])
Expenditures for food ($ bil.)	93.9	114.3	116.8	([3])
Share of income spent for food (percent)	17.2	16.7	16.8	([3])
Farm food market basket: [2]				
Retail cost ($)	1,080	1,225	1,212	Jan. 1971
Farm value ($)	414	480	450	Jan. 1971
Farmers' share of retail cost (percent)	38	39	37	Jan. 1971
Realized gross farm income ($ bil.)	49.0	56.2	55.8	([3])
Production expenses ($ bil.)	34.8	40.4	40.9	([3])
Realized net farm income ($ bil.)	14.2	15.8	14.9	([3])

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wages.
[2] Average annual quantities per family and single person household bought by wage and clerical workers 1960–61 based on Bureau of Labor Statistics figures.
[3] Annual rate, seasonally adjusted, fourth quarter 1970.



CORN BLIGHT WATCH

In the planning stage for the 1971 corn season: Detecting the southern corn leaf blight by means of remote sensing.

USDA, the National Aeronautics and Space Administration, the University of Michigan, and Purdue University are cooperating in conducting the experiment.

The Statistical Reporting Service will select fields across the Corn Belt to be photographed and observed with special equipment to determine the presence and extent of corn blight.

NASA plans to handle the high-altitude picture taking flights, and the University of Michigan will cover specific corn fields at lower levels with a new multispectral sensor.

SRS will coordinate the collection of data gathered on the ground.

SILO FIRES

What's good about a barn fire? Nothing, unless you compare it with a silo fire—one of the newest plagues to hit farmers.

With a barn fire at least, the blaze goes out when the barn burns down—if not before. And the whole thing takes only a couple of hours.

Not so with silo conflagrations. They're almost impossible to extinguish permanently before they burn themselves out—and that can take months. On the record books are one fire that burned from October to January and another that began in the fall and was still active the following April.

Silo fires can get their start with only the slightest amount of outside air—air that filters through supposedly airtight walls, leaks through cracks or bolt holes, or enters at unloading ports or doors.

Micro-organisms in the forage use oxygen trapped within the silage at filling time to cause the initial heating up. After this oxygen is gone, outside air must enter to support slow oxidation and eventually spontaneous combustion.

There appears to be a critical moisture level—researchers at the University of Wisconsin believe it may be 45 percent—below which silage is apt to burn.

Consequently unless a silo is known to be definitely airtight, it shouldn't be filled with alfalfa, clover, or grass silage containing between 20 and 45 percent moisture.

AGRICULTURAL SITUATION

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